

Important Answers about the NY Red tailed Hawk nest in New York City.

Answered by me, John Blakeman of Huron, Ohio, a life-long student of this species in the wild. I am a licensed Master Falconer, flying a red-tailed hawk. I have conducted a breeding project with this species in the early 19070s, have trapped and banded dozens of red-tailed hawks in Ohio, and have been involved in a number of scientific studies of this species in Ohio and Nevada. I advise principals involved with The Franklin Institute urban hawk nest in Philadelphia, along with those monitoring Pale Male and other red-tailed hawks in Central Park. I am a retired biology teacher and have studied wild red-tails since 1968. I'm as familiar with the biology and natural history of this species as anyone.

1. Should the band be removed from Violet's leg? No, it should not be. At the start of incubation this year, Violet's right leg was clearly very swelled, and she did not have full control of its toes. It was erroneously presumed — by both me and others at the time — that the distal leg swelling was caused by the band, that it was too tight and was pinching off proper circulation. The situation appeared ominous.

But much has been learned and observed since then. First, the time and location of Violet's banding has been learned, and this information clearly indicates that there is no present problem that should be addressed.

The hawk, a female (a "formel"), was banded in October 2006, at Delaware Water Gap, just east of the Poconos at the junction of New York, Pennsylvania, and New Jersey. Significantly, this was five years ago. If the band were too small, or was pinching into the hawks leg, the bird would have suffered and died many years ago. Because of the length of successful life the hawk has experience since 2006, it is very clear that the band has not been the cause of the observed swelling or reduced toe flexibility. A band can't be pinching a hawk's leg for five years. Very clearly, the band was properly applied and was not too small or pinching the tarsus, the leg bone.

In fact, because the band now sits far above the lower junction of the tarsus and the toes, it is clear that it is not pinching the leg; that it was freely able to slide up the leg when it swelled.

So, no, the band should not be removed.

2. Is Violet in pain or discomfort? Absolutely not. I have watched her for many hours in the last two weeks, and she is clearly in no discomfort, pain or stress. But how can that be known? Red-tailed hawks simply do not engage in any of the following behaviors when in pain or discomfort. Violet has been observed preening frequently and at length, both during the day and at night (with the wonderful night camera images). Preening in the comprehensive manner Violet exhibits doesn't happen with pain, discomfort, stress, or anxiety. She is altogether well.

But the quintessential expression of peace and mental tranquility, as any experienced falconer will tell, is when the bird "rouses," lifts her feathers, shakes them violently, and allows them to settle naturally back down onto the body. I've seen Violet rouse a number of times, and each time it has been a full, powerful rouse that red-tails do when they are happy and contented. From Violet's preening and rousing behaviors, she simply is in no discomfort, regardless of the views of those unfamiliar with hawk behaviors.

3. But still, what caused the swelling and toe debility? Doubtless, Violet has had a swelled lower foot, and she clearly does not have full control of the feet of her right foot. She cannot flex the

toes with full speed, strength, or extent. The only explanation for this is that she's been previously injured while capturing prey. Most probably, she has been bitten by the strong, sharp, and long incisors of a squirrel she attempted to kill. But she is recovered — incompletely, but adequately — from this injury. She sits, stands, and walks on the leg. She has learned that when killing prey she must use her left leg, toes, and talons to make the kill. But for as long as five years she's managed to live very successfully.

The swelling everyone saw at the start of incubation (now much reduced) almost surely was caused by the winding of plastic thread materials around her leg. These had been picked up and brought to the nest as nest lining materials. In the countryside, such materials are usually leaves, grass strands, and other natural materials. But in the city, these hawks picked up what looked to them to be equivalent materials, the Easter grass clump and some other fibrous materials, some of which got entangled around Violet's leg, causing the swelling.

But she didn't like this and was able to remove the strands with her powerful beak. It's no longer a problem.

4. We see Pip wandering around so loosely and hazardously on the nest. Won't she fall out and die when crashing on the concrete below? As much as the eyass's staggering around on this high nest appears ominous, it's not. Red-tailed hawks have been growing up — and staggering around on these high nests — for millennia. Instinctively, the little hawks do not (normally) get too close to the nest or ledge edge and topple over into the air. Have faith. The instinctive neuromuscular circuits of the little bird prevent it from falling out. There will be times, especially toward the end, when the eyass is learning to flap its incomplete wings that it will look like it will certainly fall out. But it won't. Just hold your breath and watch the spectacle, having faith in the genes, muscles, neurons, brain, and instincts of the bird. All will be well.

5. But Pip disappeared for a while. Where'd he go? The nest, the pile of sticks, rests in the corner of a wide ledge. Pip, like little human kids, will want to climb off the nest and “go exploring” out to the left. There, she will learn valuable walking lessons that she can't if confined to the nest proper. As she grows up, she will spend more time out on the ledge, just as a little toddler might spend time walking around out the yard or living room, not just its bedroom.

6. Will Bobby and Violet come back to the nest after Pip is fledged and flown away? No, as this would presume that the nest is the hawk's home. It is not, by any means. Regard the nest (as the hawks do) as only a nursery, a place to incubate eggs and raise the eyasses to fledge.

Violet spends the night on the nest (at least for the first few weeks), but only to protect her eyass, and to sit on the unhatched eggs. The nest is not Violet's home, and she does not regard it as such.

7. Well then, what is the home of these two adult hawks? It's their entire territory, all of Washington Square Park and all of the surrounding neighborhoods. They will drive out any interloping red-tail that flies into the defended territory. In rural areas red-tails commonly have defended territories of about 2 square miles. It's where they spend virtually all of their time and do all of their hunting. The nest will be somewhere in the territory.

But the territories of urban red-tails are much smaller, because the density of prey (rats, squirrels, pigeons) is much greater. No need to defend such a large area.

It would be wonderful, and biologically helpful if a group of interested WSP hawkwatchers would create a "dot map," putting a dot on a map of the area showing every place Bobby and Violet have ever been seen perching. After a few weeks of this, their territory is indicated by the dots.

8. When will Pip fly off the nest for the first time? She will do this when her flight feathers are mature and at full length, after she's spent many a minute flapping and jumping straight above the nest or ledge. After hundreds of these short trial jumps straight into the air, she will spontaneously just fly off into the Washington Square Park air. This is likely in the third week of June.

9. How well will she fly? At first, very, very poorly. Anyone watching the first flights will be horrified. She will be able to take off okay, but both navigating and landing are difficult problems that must be quickly solved. Most likely, Pip will try to land in a tree below on her first flight. But she's never once landed, and won't know how to do this. She will extend her legs and grab a limb of a tree, probably one far too small to support her.

Then, she will just fall over, hanging on upside down. She will look around, trying to figure out what to do next. She may try to right herself, but she won't have the strength or coordination to do that. Finally, she will just let go and resume her flight. This time, she may land, ignominiously, on the ground.

She'll look around ever so stupidly, and figure out that she needs to now fly UP to something. So she will. But she may land ever so awkwardly once again.

In time, perhaps within an hour or so, she will begin to master take-offs and landings. It's always fun to watch this (but few have had the chance).

10. Is Pip a male or female? Until she's about fully developed, just before she makes her maiden flight, it will be impossible to know. Red-tails of both sexes are identically colored. The only way to sex this species is to either weigh them, or with knowledge and experience, examine the size of their tarsi (lower legs) and feet. Formels (females) are a bit larger than tiercels (males), with larger, stronger legs and feet. If the bird could be captured, various body lengths could be measured, and it could be weighed, revealing the bird's sex. But in Pip's case, only a visual examination of the feet and legs by someone experienced in sexing wild red-tails will be useful. If I can get some high-res shots of the bird in its fourth or five week, I can make the determination.

11. So if we can't know if Pip is a he or a she, why do you universally call her a "she?" By social convention of falconers and those who love raptors. In falconry, females are generally the more preferred sex, as they are larger and stronger than the smaller males. Since the middle ages, in European falconry, hawks and falcons of unknown sex have been respectfully referred to in the feminine gender, just as ships are "she's," not "it's."

There is a slightly greater chance that Pip is a female. The exact ratios are not known, but generally about 60% of fledged red-tail eyasses are females and 40% males.

12. What are the proper terms for ages and sexes of red-tailed hawks? A female hawk is a "formel." A male hawk is a "tiercel," pronounced "TIR-sel." A baby hawk is an "eyass," pronounced "EYE-ess." The New York Times spells this "eyas," perfectly acceptable, deriving from the newspaper's preferred reference dictionary. Eyass and eyas were first used in the

Middle Ages and into Elizabethan times, when orthography (standardized spelling) was not in use. Most American falconers and raptor biologists (including me) prefer “eyass.”

Adult hawks and falcons are, respectfully, called “haggards.” In common usage, the term can be pejorative, but when referring to adult raptors it conveys the maturity and fine accomplishments of these older, more wise birds.

When Pip starts wondering around off the nest, she will be said to be “branching,” and when older, with all of her feathers nearing maturity, she will then become a “brancher.” This derives from the branching habits of growing eyasses in tree nests.

13. With all those dead animal parts, isn't the nest pretty smelly by now? Yes, it is. The haggards will carry away all of the larger animal remnants and drop them away a good distance from the nest. But still, there is old blood and other prey remnants that rot and provide a particular olfactory signature to the nest. The hawks don't much care.

That's why there will be increasing numbers of flies.

14. Will this nest be used by the same pair next year? We all hope so. There is a very high chance for this, even if either of the haggards might die. If either haggard dies, a new mate will almost instantly come in and pair up with the widow or widower. There is a large population of these “floaters,” yet-unmated adults searching for a good territory and mate.

But in all likelihood, both Bobby and Violet will survive to next breeding season and will be seen flying together next December or January, when the breeding season will resume. If the nest has not been removed by NYU, it will be reused, with another layer of new sticks, probably 6 inches or more.

Next year, because of the haggards' maturity and experiences, there is a very high chance of 3 eyasses hatching.

15. What will happen to Pip after she fledges in June? First, she will learn to fly, land, and take off. Then, she will begin to learn to hunt, watching every small thing that moves in the landscape. In June and July, she will not be able to kill enough food to survive. Her parents will kill rats and other prey and leave them for the eyass to feed on.

But by August the parents will stop providing make-up food. Pip will be on her own. By then, she must have learned successful hunting and killing lessons. In a few months it will be winter, when finding and killing prey can be hard.

In late August or in September Pip will feel the urge to start migrating south. One day she will be seen, as during all of the summer, in Washington Square Park. Then she will mysteriously disappear. She will have lofted up and turned south, crossing over into New Jersey where she will begin her autumnal journey south.

If she is successful in finding prey, she will return north next spring, perhaps even for a short time, to Manhattan. But if she's observed next spring by her parents, they will instantly drive her away, out of the haggards' territory. For a red-tail, there's never a coming back “home.”

16. What are Pip's chances of surviving her first year in the wild? Not good, as little as 20%. More than half of all fledged red-tails die in their first summer, before living to September.

Cruelly, most of them starve, being unable to capture enough prey after parents stop providing make-up food in mid-summer. At the end of summer, haggard parents no longer concern themselves solely with the welfare of their fledged eyasses. Now, they are concerned only for themselves, and lingering youngsters interfere and are driven off, to migrate to the south for the ensuing winter.

As cruel as this all seems, it actually indicates a healthy red-tail population. Young red-tails have great difficulty finding new, unoccupied territories in which to start their own families. Most territories are already occupied by old, resident birds. The young hawks are relegated to prey-poor, peripheral wild areas, where nesting and bringing up offspring can be extremely difficult.

In fact, this is exactly why Pale Male started all of this back in the 1990s. He was a young, unmated loner and had no place in the countryside to live, so per chance, he drifted over Central Park and dropped in to live there. That changed red-tail hawk biology, at least in urban areas, forever.

Pale Male, as will Pip, had to learn how to hunt and capture urban prey. The rats are very easy. But not so with squirrels, or especially pigeons. That's why we rural raptor biologists are so interested on all of this. The urban hawks have created a new raptor biology, accomplishing things we never thought possible, such as nesting and reproducing on places so atypical as Manhattan Island.

17. Are Bobby and Violet mated for life? Yes, so long as both survive.

But some important factors should be understood. Properly, "mating" in this regard refers to "pair-bonding," where both birds socially bond with the other. Being pair-bonded, they won't attack or harass each other, and will mutually defend their territory. They will often even share food.

But this "mating" should not be confused (as it so often is) with copulation. Let's use the term properly. Mating refers to the social bonding of the pair, not sexual intercourse, copulation.

Not to be sordid or inappropriate, it is good to properly understand red-tail copulation. I mention this because if all goes as hoped, Bobby and Violet will be seen commonly and frequently copulating in Washington Square Park next winter.

The formel, Violet in our case, will land on an elevated perch, often on a roof edge of a tall building. She will bend over into a horizontal position. Bobby is watching all of this and immediately will land on Violet's back. He will maneuver his cloaca, the sexual opening under his tail, around and under Violet's tail. He will inject a squirt of semen into Violet's cloaca, then right himself and fly off to a nearby perch. Both birds will rouse in abject joy and accomplishment. All of this will take 5 to 7 seconds.

But before any of this physical contact, both birds will often soar above, with legs descended. Soaring with descending legs is a profoundly sexual gesture. My Presbyterian ancestors would have strictly forbidden this if they could have, both in Manhattan and in rural Ohio. Knowing what we know, we raptor biologists just snicker in great delight when we see a pair of haggards soaring in leg-descended postures in January and February. We can read their minds, and vicariously share their ensuing delights.

18. Will red-tailed hawks attack and kill small dogs? In almost all cases, this is a non-issue. Yes, red-tails are large hawks, with a 4-ft wingspan. But except in very, very rare cases, small dogs are no danger whatsoever from an attack by a red-tail.

Most small dogs are simply larger prey than red-tails wish to attack. And they are usually in residential or urban areas with few or no hunting hawks. But most importantly, most red-tails prefer not to attack large prey. They prefer voles and mice and rats, not dogs.

The only exception — again, very, very rare — would be in the case of a starving first-year red-tail at the end of the summer, when its parents are no longer feeding it and it has been an unsuccessful hunter. In the very rarest cases, such a hawk, in great desperation, might try to attack a lone, unaccompanied very small dog — which it would not be able to kill and would probably be severely bitten by the dog.

Worrying about one's small dog being attacked by a hawk is similar to worrying that a big tree limb would fall on the dog and kill it.

But what about the Chihuahua that was attacked by a hawk in New York city a few years ago? First, the hawk that did this was a captive, animal-control company's Harris's hawk, not a red-tail. And that hawk was selected to attack urban vermin, rats and pigeons. It was an attempt to more "naturally" control rats and pigeons in the New York park, by way of a trained hawk. The hawk saw a small dog in some shrubbery and thought it to be something it should attack, so it did. That animal control program, understandably, has since been cancelled.